Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-24.   Cancelled.

25. (New) A method for retiring instructions in a processor that executes a group of instructions, one or more of the group of instructions executed out of a program order, comprising:

assigning tags to instructions;

determining whether an executed instruction is retirable;

storing results of executed instructions in an index-addressable temporary buffer, wherein at least part of a tag assigned to an instruction indicates a location in said index-addressable temporary buffer where an execution result for the instruction is to be stored; and

retiring approximately simultaneously a group of retirable instructions, wherein said retiring comprises transferring execution results of said group of retirable instructions from said index-addressable temporary buffer to a register array, wherein said execution results of said group of retirable instructions are retrieved from said index-addressable temporary buffer based on at least part of each tag assigned to an instruction in said group of retirable instructions.

26. (New) The method of claim 25, wherein said assigning comprises assigning a tag to an instruction wherein the value of a tag is based on a location of said instruction in an instruction window.

27. (New) The method of claim 25, further comprising:

retiring instructions executed in program order by transferring an execution result directly from a functional unit to said register array.

28. (New) The method of claim 25, wherein said retiring comprises retiring a group of instructions that includes at least two instructions.

29. (New) The method of claim 25, wherein said retiring comprises retiring a group of instructions that includes four instructions.

30. (New) The method of claim 25, wherein said retiring comprises simultaneously transferring execution results of more than one instruction from said index-addressable temporary buffer to said register array.

31. (New) The method of claim 25, further comprising:

assigning done flags to the instruction or instructions determined to have been executed;

wherein said determining whether an executed instruction is retirable comprises checking said done flags to determine whether all instructions appearing earlier in the program order have completed.

32. (New) The method of claim 25, wherein said retiring comprises simultaneously transferring execution results of more than one instruction from said index-addressable temporary buffer to said register array in a single clock cycle.

33. (New) A method for retiring instructions in a processor that executes a group of instructions, one or more of the group of instructions executed out of a program order, comprising:

determining whether an executed instruction is retirable;

storing results of executed instructions in a temporary buffer, wherein at least one of said instructions is executed out of a program order;

transferring execution results of at least one instruction from said temporary buffer to a register array; and

transferring at least one execution result directly from a functional unit to said register array.

34. (New) The method of claim 33, wherein said storing comprises storing results of executed instructions in an index-addressable temporary buffer, wherein execution results in said index-addressable temporary buffer are addressable by tags that include an address of a storage location in said index-addressable temporary buffer.

35. (New) The method of claim 34, further comprising:

generating one or more tags to specify the storage location of execution results in said index-addressable temporary buffer, wherein the value of a tag for an instruction is based on a location of said instruction in an instruction window.

36. (New) The method of claim 33, wherein said transferring comprises transferring execution results of more than one instruction approximately simultaneously from said temporary buffer to said register array.

37. (New) The method of claim 33, wherein said transferring comprises transferring execution results of at least two instructions from said temporary buffer to said register array in a single clock cycle.

38. (New) The method of claim 33, wherein said transferring comprises transferring execution results of four instructions from said temporary buffer to said register array in a single clock cycle.

39. (New) The method of claim 33, further comprising:

assigning done flags to one or more instructions determined to have been executed;

wherein said determining whether an executed instruction is retirable comprises checking said done flags to determine whether all instructions appearing earlier in the program order have completed.